

From: [Chin, Lucita](#)
To: [Logan, Paul](#); [Ward, W. Robert](#)
Subject: FW: Casper Star Tribune article -- Encana aims to dispose of wastewater in Madison aquifer
Date: Wednesday, February 27, 2013 6:33:54 AM
Attachments: [Document.pdf](#)
[FINAL Docket 3-2013 Encana O G \(USA\) Marlin 29-21 WDW.pdf](#)

FYI – we met with Encana and WOGCC several months back, and it was really just a listening session. While Encana was looking to EPA wondering whether we'd approve their aquifer exemption, the WOGCC had not completed their process, so we didn't have anything to comment on. We helped them to understand our regs and our process. They are in a different posture in the State's process now. They just had a hearing about a month ago before the WOGCC, and this article is about WDEQ's comments regarding the action before WOGCC. Let me know if you have any questions, Lucita

Lucita Chin
Associate Regional Counsel
U.S. EPA Region 8
1595 Wynkoop St.
Denver, CO 80202
303.312.7832

From: Minter, Douglas
Sent: Tuesday, February 26, 2013 12:23 PM
To: Hoskie, Sadie
Cc: Jackson, Dan; Bowling, Linda; Cheung, Wendy; Chin, Lucita
Subject: RE: Casper Star Tribune article -- Encana aims to dispose of wastewater in Madison aquifer

Sadie: Yes we are reviewing this request. Attached is the WYDEQ's objection letter as well as our initial response asking for more data. DPP/AC



While we plan to keep in touch with the WYDEQ concurrent with our analysis, we will encourage both the WYDEQ and WYOGCC to collaborate with each other to work toward a resolution prior to our decision.

Douglas K. Minter
UIC Team Leader
USEPA Region 8
(303) 312-6079

From: Hoskie, Sadie
Sent: Monday, February 25, 2013 12:31 PM
To: Minter, Douglas; Jackson, Dan; Cheung, Wendy
Cc: Pratt, Steven

Subject: FW: Casper Star Tribune article -- Encana aims to dispose of wastewater in Madison aquifer

What do we know about the issue below? Are we actively reviewing the request?

From: Cantor, Howard

Sent: Saturday, February 23, 2013 6:30 PM

To: Derrith Watchman-Moore; Gaydosh, Mike; Fay, Kate; Hoskie, Sadie

Subject: Casper Star Tribune article -- Encana aims to dispose of wastewater in Madison aquifer

Howard Cantor
Deputy Regional Administrator
US EPA, Region 8
Phone: (303)312-6308

Encana aims to dispose of wastewater in Madison aquifer

By ADAM VOGUE Star-Tribune energy reporter

Wyoming's environmental regulatory agency is objecting to an oil and natural gas company's plan to inject wastewater into a Wyoming aquifer.

The Wyoming Department of Environmental Quality in a Feb. 11 letter opposed a plan by Encana Oil and Gas to pump water from its oil and gas wells deep into the Madison geological formation.

Encana, a Calgary, Alberta-based producer with a major active project south of Pinedale, is seeking permission from the Wyoming Oil and Gas Conservation Commission for a disposal well located in Encana's Moneta Divide project area about 60 miles west of Casper.

Under the company's plan, water produced from approximately 280 existing oil and gas wells would be injected into the aquifer about 15,000 feet below the ground, far deeper than most water wells.

But the DEQ won't back the plan, saying the water in the formation produces drinking water elsewhere in the state, and is therefore an important potential water source.

"Clearly, future potential use of the Madison in the area of development is within the realm of possibility," wrote James O'Connor, a DEQ geologist. O'Connor added that the water is of similar quality to water being piped into Gillette from 40 miles away, also from the Madison formation.

Despite its use as a drinking water source elsewhere in the state, Encana officials say there's little chance the water below the Moneta Divide could be practically obtained and potable for end users.

"Where we are proposing to inject is extremely deep and the water quality in this part of the formation is poor," Paul Ulrich, the company's project lead for the Moneta Divide, said in an interview. "It would be extremely expensive for anybody to produce this water for residential or

domestic use."

Ulrich said the water's total dissolved solids content, a measure that gauges tiny organic and inorganic matter in water, has tested at around 1,000 milligrams per liter of water. The EPA recommends drinking only water below 500 milligrams of dissolved solids per liter.

Ulrich added that tests also showed the underground water exceeds standards for potentially harmful naturally-occurring substances like radium, arsenic, lead and mercury.

"The overall water quality of the water in the Madison would require significant treatment to make it potable," he said. "That is part of our submission."

Encana has said in statements to the oil and gas commission that the water is far too deep for a typical water well, meaning it would be costly to retrieve the water. And because the water under the Moneta is far from towns or cities -- about 40 miles from Riverton -- Ulrich said the cost to obtain the water would also have to include funds to transport it.

"It would be impractical for Riverton or Lander or Shoshoni's needs, even 50 or 100 years from now," he said.

A company official said Thursday Encana isn't certain how the well would factor into a plan -- currently under regulatory review -- to expand the field.

Members of a Wyoming landowners group say they're investigating the disposal request.

"We are generally concerned about it, and are looking into it because we're concerned any time a drinking water aquifer could be exempted," said Jill Morrison, an organizer with the Powder River Basin Resource Council. "It seems right now the DEQ and [U.S. Environmental Protection Agency] have the public's interest at the forefront."

The company had planned to appear before the commission earlier this month to state its case, but asked for a continuance until March after the DEQ's and EPA's responses to the plan.

The EPA, also asked by the commission to weigh in on the proposal, offered no judgment but did ask several questions about regional geology and water wells. The agency also asked why two neighboring formations, the Tensleep and Nugget, couldn't be used as a target zone. Ulrich said Thursday the company doesn't think either of the two would be able to handle injection.

Ulrich said Encana is working to respond to the EPA's and DEQ's other questions and concerns. The matter is tentatively on the commission's March agenda.

"We've met the requirement for a technical and economic exemption for this aquifer," he said.

"We're confident over the next couple of weeks, in discussion with the EPA and DEQ, that we'll be able to address the issues that they've brought up to their satisfaction."